

**Amendments to the Claims**

The following listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

- 1-13. (cancelled)
14. (previously presented): A method of coupling a carbon foam material to an integrated circuit comprising:
- coating a carbon foam material with first solder; and  
coupling the carbon foam material coated with first solder to the integrated circuit  
such that thermal energy from the integrated circuit is transferred to the carbon foam material.
15. (previously presented): The method of claim 14, further comprising cleaning a surface of the integrated circuit.
16. (previously presented): The method of claim 14, further comprising cleaning a surface of the integrated circuit by backspattering the surface of the integrated circuit with an inert gas.
17. (previously presented): The method of claim 14, further comprising cleaning a surface of the carbon foam material.
18. (previously presented): The method of claim 14, further comprising cleaning a surface of the carbon foam material by backspattering with an inert gas.

19. (previously presented): The method of claim 14, further comprising coating a surface of the integrated circuit with a second solder.
20. (cancelled)
21. (cancelled)
22. (previously presented): The method of claim 14, wherein a second solder couples the integrated circuit and the carbon foam material, and wherein the second solder comprises copper, nickel, gold, silver, lead, silicon, indium, bismuth, titanium, tin, or mixtures thereof.
23. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises coupling the integrated circuit and the carbon foam material with a universal solder.
24. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises coupling the integrated circuit and the carbon foam material with adhesives.
25. (previously presented): The method of claim 14, further comprising forming a silicide on a surface of the integrated circuit.
26. (previously presented): The method of claim 25, further comprising coating a surface of the silicide with an adherent metal.
27. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in an inert atmosphere furnace.

28. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in a reducing atmosphere furnace.
29. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in a vacuum furnace.
30. (previously presented): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit on a hot plate.
31. (cancelled)
32. (previously presented): A method of coupling a carbon foam material to an integrated circuit comprising:  
  
applying solder to a surface of a carbon foam material; and  
  
coupling the carbon foam material to the integrated circuit such that thermal energy from the integrated circuit is transferred to the carbon foam material, wherein the solder is disposed between the carbon foam material and the integrated circuit, and wherein the solder is applied to the carbon foam material prior to coupling.
33. (previously presented): The method of claim 32, wherein the carbon foam material is disposed within a chamber.
34. (previously presented): The method of claim 33, further comprising coupling conduits coupled to the chamber, wherein the conduits are configured to direct a heat exchange fluid into the chamber.

35. (currently amended): The method of claim 32, wherein a depth of solder applied to the carbon foam comprises at least two carbon foam ligament diameters into a body of the carbon foam material.
36. (previously presented): The method of claim 32, wherein the solder comprises a reactive braze alloy.